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NOTES ON GEOGRAPHIC DISTRIBUTION

First state record and distribution extension of *Pleurodema diplolister* (Peters 1870) (Anura: Leiuperidae) from state of Goiás, Brazil

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ABSTRACT: Here we provide a new record of *Pleurodema diplolister*, extending its distribution around 82 km southeast from the nearest locality reported. The species was found in the municipality of São Domingos, state of Goiás, Central Brazil. This is the first record of this species in the state of Goiás.

The genus *Pleurodema* Tschudi 1838 is composed of 15 species (Frost 2011) distributed in the Neotropical region mostly in areas with dry or open forest formations (Lynch 1971; Duellman and Veloso 1977; Feio and Caramaschi 1995; Correa *et al*. 2007; Ferraro and Casagranda 2009; Kolenc *et al*. 2009).

Pleurodema diplolister (Peters 1870) is a species with fossorial habits, explosive reproductive strategies correlated to rainfall, and fast larval development (Santos *et al*. 2003). The species is widely distributed in northeastern Brazil in areas primarily associated within the Brazilian dry biome " Caatinga" (Lourenço *et al*.,2006; Loebman and Mai 2008; Leite *et al*. 2008; Valdujo 2009; Maciel and Nunes 2010). Records of *P. diplolister* from Cerrado biome in Central Brazil are associated to transitional areas with the " Caatinga" (Vitt *et al*. 2005; Valdujo *et al*. 2011). Herein, we provide the first record of *P. diplolister* from state of Goiás, in Central Brazil.

On 18 November 2009 an adult specimen of *Pleurodema diplolister* (Figure 1) was collected in the municipality of São Domingos, state of Goiás, Brazil (13°22'48" S, 46°20'00" W). The specimen was on the floor near a temporary pond formed after a storm, located at the margins of the secundary road near to the highway GO-463 and the Hydroelectric Power Plant São Domingos II (collection permit: SEMARH 002/2008). The collected specimen was euthanized with 5% lidocaine gel, fixed in 10% formalin and preserved in alcohol 70%, tissue samples were not taken. Was subsequently deposited at the Zoological Collection of the Federal University of Goiás (ZUFG), Goiânia, state of Goiás, Brazil (Specimen number: ZUFG 5910). The specimen of *P. diplolister* from Goiás state fully agree with the diagnosis of Duellman and Veloso (1977).

The record of *Pleurodema diplolister* from São Domingos municipality represents the first record of this species in the state of Goiás (Figure 2, Table 1) and extends known distribution *ca*. 82 km southeast from the nearest previously recorded locality (Arraias municipality, state of Tocantins; Maciel and Nunes 2010). In addition, it represents an important biogeographical record for the known distribution of *P. diplolister*, as it is inserted in the relictual area of distribution of Seasonally Dry Tropical Forests (SDTF) in central Brazil. The occurrence of *P. diplolister* in São Domingos may represent evidence of historical connections between Caatinga and the SDTF enclaves within the Cerrado. Biogeographic patterns have suggested that during the lifetime of the Pleistocenic Arc (~21kyr BP; Last Glacial Maximum), some components of the nucleus of Caatinga may have colonized the Cerrado region, where they currently maintain viable populations at the disjunct STDF enclaves, with great importance for biodiversity conservation (Silva and Bates 2002; Werneck and Colli 2006).

FIGURE 1. *Pleurodema diplolister* (ZUFG 5910) collected in São Domingos municipality, state of Goiás, Central Brazil.

Table 1. Localities with records of *Pleurodema diplolister* and their respective literature references. See Figure 2 for distribution map.

LOCALITY	SITE	GEOGRAPHIC COORDINATE	LITERATURE CITED
Maranhão state (MA)			
Barreirinha	1	04°13'60.00" S, 44°13'60.00" W	Lourenço *et al.* 2006
Piauí state (PI)			
Parnaíba	2	02°54'14.14" S, 41°46'34.54" W	Caramaschi 2008
Cajueiro da Praia	3	02°56'29.96" S, 41°21'0.13" W	Loebman and Mai 2008
Picos	4	07°5'13.17" S, 41°28'11.73" W	Maciel and Nunes 2010
Brejo do Piauí	5	08°11'58.54" S, 42°49'56.58" W	Maciel and Nunes 2010
Ceará state (CE)			
Mucuripe	6	03°43'31.41" S, 38°29'1.24" W	Caramaschi 2008
Brejo Santo	7	07°29'24.69" S, 38°59'5.58" W	Caramaschi 2008
Rio Grande do Norte state (RN)			
Maracajaú	8	05°25'0.00" S, 35°19'0.00" W	Maciel and Nunes 2010
Paraíba state (PB)			
Maturéia	9	07°15'59.34" S, 37°20'57.08" W	Maciel and Nunes 2010
Pernambuco state (PE)			
Triunfo	10	07°50'25.80" S, 38° 6'0.55" W	Maciel and Nunes 2010
Salgadinho	11	07°55'18.09" S, 35°38'46.88" W	Maciel and Nunes 2010
Caruaru	12	08°16'50.92" S, 35°58'31.59" W	Maciel and Nunes 2010
Ouricuri	13	07°52'37.14" S, 40° 4'49.05" W	Caramaschi 2008
Dormentes	14	08°26'20.76" S, 40°45'46.33" W	Caramaschi 2008
Afrânio	15	08°30'41.91" S, 41° 0'35.64" W	Maciel and Nunes 2010
Alagoas state (AL)			
Feliz Deserto	16	10°17'36.66" S, 36°18'44.25" W	Maciel and Nunes 2010
Sergipe state (SE)			
Brejo Grande	17	11°15'43.00" S, 37°37'12.00" W	Caramaschi 2008
Bahia state (BA)			
Juazeiro	18	09°26'18.48" S, 40°30'18.81" W	Caramaschi 2008
Mata Escura	19	12°55'58.38" S, 38°27'21.87" W	Maciel and Nunes 2010
Valença	20	13°22'26.49" S, 39° 4'3.36" W	Maciel and Nunes 2010
Boa Nova	21	14°21'15.03" S, 40°12'46.52" W	Maciel and Nunes 2010
Morro do Chapéu	22	11°33'8.66" S, 41° 9'27.24" W	Leite, Juncá and Eterovick 2008
Santo Inácio	23	11° 6'31.61" S, 42°43'25.24" W	Maciel and Nunes 2010
São Bartolomeu	24	12°28'0.00" S, 42°49'60.00" W	Maciel and Nunes 2010
Bom Jesus da Lapa	25	13°15'16.59" S, 43°25'7.84" W	Caramaschi 2008
Barra do Rio Grande	26	12°13'17.54" S, 44°45'54.06" W	Maciel and Nunes 2010
São Desidério	27	12°21'7.59" S, 44°59'3.21" W	Valdujo *et al.* 2009
Minas Gerais state (MG)			
Cristália	28	16°45'17.02" S, 42°54'29.43" W	Feio and Caramaschi 1995
Tocantins state (TO)			
Jalapão	29	10° 3'0.00" S, 46°58'0.00" W	Vitt *et al.* 2005
Mateiros	30	11°11'60.00" S, 46°52'60.00" W	Valdujo *et al.* 2011
Arraias	31	12°55'35.12" S, 46°56'6.66" W	Maciel and Nunes 2010
Goiás state (GO)			
São Domingos	-	13°22'48" S, 46°20'00" W	New record, this study

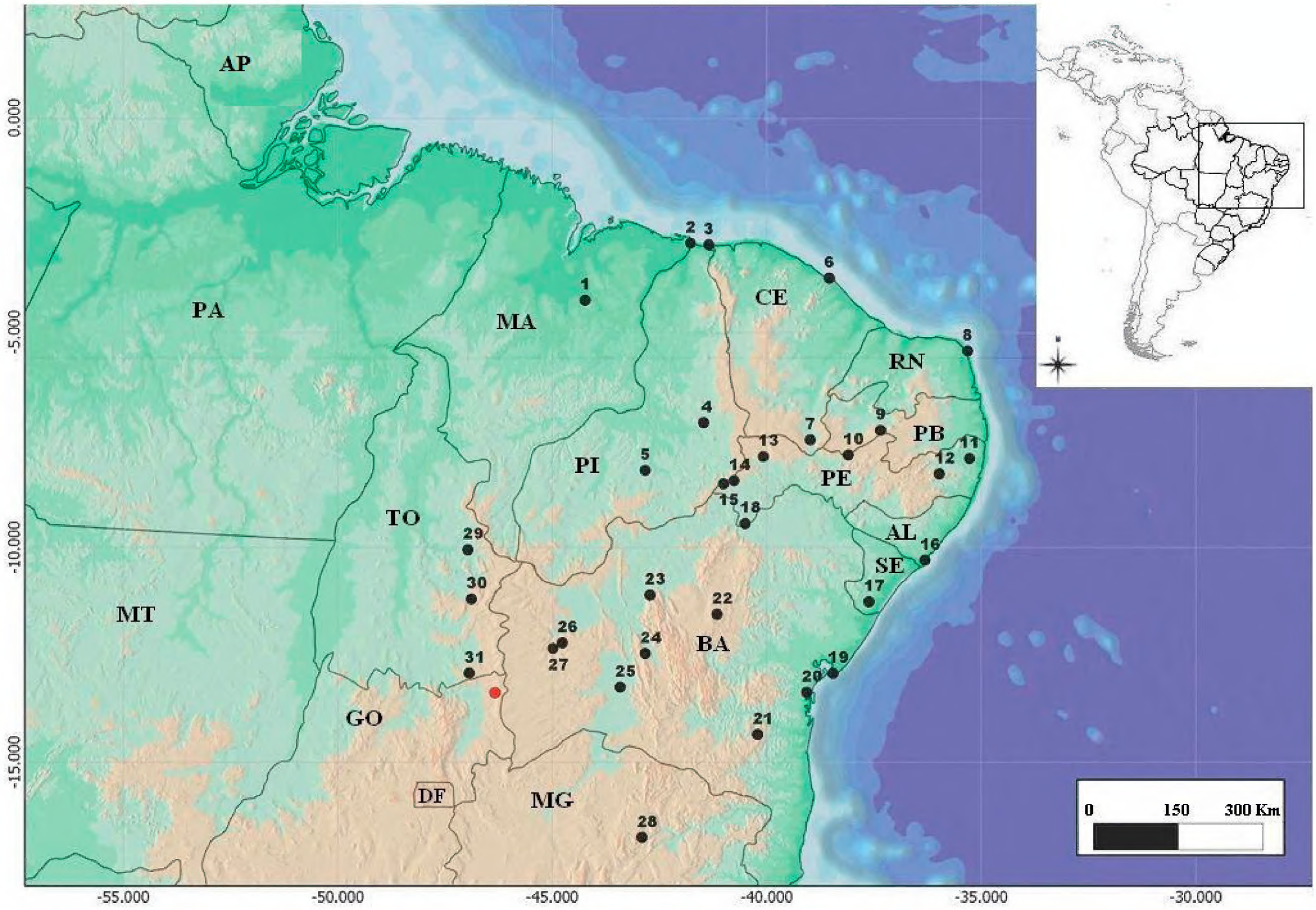

Figure 2. Distribution map of *Pleurodema diplolister*. Closed circles represent literature data (see Table 1 for localities numbers and literature) and the red circle represents the new record in State of Goiás, Central Brazil.

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Literature Cited

Caramaschi, U. 2008. Taxonomic status of *Leptodactylus ochraceus*, a forgotten species (Anura: Leptodactylidae). *Revista Brasileira de Zoologia* 25(3): 523-528.

Correa, CL, M. Sallaberry, BA González, ER Soto and MA Méndez. 2007. Amphibia, Anura, Leiuperidae, *Pleurodema thaul*: Latitudinal and altitudinal distribution extension in Chile. *Check List* 3(3): 267-270.

Duellman, WE and AM Veloso. 1977. Phylogeny of Pleurodema (Anura: Leptodactylidae): a biogeographic model. *Occasional Papers of the Museum of Natural History* 64: 1-40.

Feio, RN and U. Caramaschi. 1995. Aspectos zoogeográficos dos anfíbios do médio rio Jequitinhonha, nordeste de Minas Gerais, Brasil. *Revista Ceres* XLII(239): 53-61.

Ferraro, DP and MD Casagranda. 2009. Geographic distribution of the genus *Pleurodema* in Argentina (Anura: Leiuperidae). *Zootaxa* 2024: 33-55.

Frost, DR. 2011. *Amphibian Species of the World: an online reference*. Version 5.5. (23 August 2011).

Kolenc, F., C. Borteiro, D. Baldo, DP Ferraro and C. Prigioni. 2009. The tadpoles of *Pleurodema bibroni* Tschudi and Pleurodema kriegi (Müller), with notes on their advertisement calls, natural history and conservation status (Amphibia, Anura, Leiuperidae). *Zootaxa* 1969: 1-35.

Leite, FSF, FA Juncá and PC Eterovick. 2008. Status do conhecimento, endemismo e conservação de anfíbios anuros da Cadeia do Espinhaço, Brasil. *Megadiversidade* 4(1-2): 158-176.

Loebman, D., ACG Mai. 2008. Amphibia, Anura, Coastal Zone, state of Piauí, Northeastern Brazil. *Check List* 4(2): 161-170.

Lourenço, LB, JA Andrade-Nascimento, GV Andrade, DC Rossa-Feres and SM Recco-Pimentel. 2006. Chromosomal analysis of the leptodactylids Pleurodema diplolistris and *Physalaemus nattereri* (Amphibia, Anura). *Amphibia-Reptilia* 27: 481-489.

Lynch, JD. 1971. Evolutionary relationships, osteology, and zoogeography of leptodactyloid frogs. University Kansas, Lawrence, *Miscellaneous publication* 53: 1-238.

Maciel, DB and I. Nunes. 2010. A new species of four-eyed frog genus *Pleurodema* Tschudi, 1838

(Anura: Leiuperidae) from the rock meadows of Espinhaço range, Brazil. *Zootaxa* 2640: 53-61.

Santos, JWA, RP Damasceno and PL Rocha. 2003. Feeding habitas of the frog Pleurodema diplolistris (Anura, Leptodactylidae) in Quartenary sand dunes of the Middle Rio São Francisco, Bahia, Brazil. *Phyllomedusa* 2(2): 83-92.

Silva, JMC and JM Bates. 2002. Biogeograhic patterns and conservation in the South American Cerrado: a tropical savanna Hotspot. *BioScience* 52:225-233.

Valdujo, PH, RS Recoder, MM Vasconcelos and AS Portella. 2009. Amphibia, Anura, São Desidério, western Bahia uplands, northeastern Brazil. *Check List* 5(4): 903-911.

Valdujo, PH, A. Camacho, RS Recoder, M. Teixeira-Junior, JMB Ghellere, T. Mott, PMS Nunes, C. Nogueira and MT Rodrigues. 2011. Anfíbios da Estação Ecológica Serra Geral do Tocantins, região do Jalapão, Estados do Tocantins e Bahia. *Biota Neotropica* 11(1): 251-261.

Vitt, LJ, JP Caldwell, GR Colli, AA Garda, DO Mesquita, FGR França, DB Shepard, GC Costa, MM Vasconcellos and V. Novaes-e-Silva. 2005. Uma atualização do guia fotográfico de répteis e anfíbios da região do Jalapão no Cerrado Brasileiro. *Occasional Papers of the Oklahoma Museum of Natural History* 2: 1-24.

Werneck, FP and GR Colli. 2006. The lizard assemblage from Seasonally Dry Tropical Forest enclaves in the Cerrado biome , Brazil , and its association with the Pleistocenic Arc. *Journal of Biogeography* 33 (11): 1983 – 1992.

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